

### REASONS FOR ALLOWANCE

1. Claims 34, 35, 47, 48 and 51-66 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The closest prior art of record does not teach, disclose or suggest a method and system for irradiating an article by determining whether an article will receive an amount of radiation between a set limit and moving the article into or out of a radiation path based on the determination as set forth in independent claims 34 and 47; in combination with a plurality of radiation sources disposed on opposite sides of a load transport member that is configured to transport the articles along a transport path past the radiation sources.

Kotler (U.S. Patent No. 6,504,898) discloses a method and apparatus for irradiating a product or stack of products with a relatively evenly distributed radiation dosage throughout the product using a turntable for rotating the item(s) to be irradiated during radiation exposure, a radiation source, an adjustable collimator, and a specified control system therefor (col. 3, 1.40 - col. 5, 1. 20; col. 12, 11. 61-67). Kotler discloses that the turntable may be moved "toward or away from the adjustable collimator or the turntable may be moved laterally, so that an axis of rotation of the product on the turntable is offset from the X-ray beam axis" (col. 5, 11. 2-5). Kotler identifies a dose uniformity ratio (DUR) as the ratio of the maximum radiation dosage to the minimum radiation dosage received at some location within a product or product stack in a given treatment with low ratios of about 1 indicating a high level of dosage uniformity

throughout the product (col. 7, 11.22-45). Kotler teaches that the DUR is low within a product stack using their process and system, which employs an adjustable collimator for attenuating the radiation and shaping the radiation beam that is passed, a rotating turntable for holding the product stack, and a control system for modulating parameters of the radiation system and for delivering an appropriate radiation dose within the product stack (col. 4, 11. 28-51). Kotler does not disclose a plurality of radiation sources disposed on opposite sides of a load transport member that is configured to move the article along a transport path past the radiation sources.

Bergeret (U.S. Patent No. 4,852,138) is directed to an irradiation cell conveyor system, which conveyor system transports goods to be irradiated on conveyors past a radiation source panel (abstract). In so doing, Bergeret discloses the use of a plurality of irradiator conveyor lines that are parallel to one or more radiation source panels for irradiating parcels of a variety of dimensions as they are carried by the conveyor lines (id, col. 5, 11. 18-31 and 40-44; Fig. 2). Bergeret does not disclose the steps of determining whether an article will receive an amount of radiation between a set limit and moving the article into or out of a radiation path based on the determination.

Allen (U.S. Patent No. 6,492,645) discloses or suggests a system and method for irradiating products, such as food and medical instruments, while they are carried on a process conveyor past two radiation sources supplying radiation to the products in opposite directions while the products are conveyed in a direction substantially normal to the paths of the radiation applied to the transported items (col. 1, 1.56 - col. 2, 1.5 and col. 5, 11.35-63; Figs. 1 and 4). Allen does not disclose the steps of determining

whether an article will receive an amount of radiation between a set limit and moving the article into or out of a radiation path based on the determination.

Nonetheless, the combination of Kotler in view of Bergeret or Allen would render the device of Kotler unsatisfactorily for its intended purpose, wherein Kotler teaches away from the proposed modification because, as Kotler clearly illustrates, the desired radiation profile is achieved by employing an adjustable collimator in conjunction with a turntable. Specifically, in Kotler it is the inversion of the radiation profiles achieved between the scenario depicted in Figures 2(a) and 2(b) and the scenario depicted in Figures 2(c) and 2(d) that instigates the combination of the turntable and adjustable collimator of the Kotler device. It is the ability to adjust the shape of the radiation with the collimator in combination with the turntable that allows the system to achieve the scenario illustrated in Figures 2(e) and 2(f).

Thus, the closest prior art of record, namely Kotler, Bergeret or Allen, does not disclose a method and system for irradiating an article by determining whether an article will receive an amount of radiation between a set limit and moving the article into or out of a radiation path based on the determination as set forth in independent claims 34 and 47; in combination with a plurality of radiation sources disposed on opposite sides of a load transport member that is configured to transport the articles along a transport path passed the radiation sources.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN C. JOYNER whose telephone number is (571)272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCJ

/Sean E Conley/  
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